

(12) UK Patent Application (19) GB (11) 2 336 389 (13) A

(43) Date of A Publication 20.10.1999

(21) Application No 9808158.1

(22) Date of Filing 18.04.1998

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(51) INT CL⁶
E04D 15/02

(52) UK CL (Edition Q)
E1S SAD

(56) Documents Cited
GB 2281092 A

(58) Field of Search
UK CL (Edition P) E1S SAB SAD SAF
INT CL⁶ E04D , E04G

(54) Abstract Title

Fixing hip- or ridge-tiles on a roof

(57) Two battens 10,12 are rigidly secured to one another by means of U - shaped brackets to lie parallel and spaced by a distance equal to the width of the angled hip - or ridge - tiles. The battens are placed so as to straddle the hip or ridge, and the tiles are cemented thereto whilst the battens act both as alignment guides and temporary shutters for the cement. The spacing between the battens 10, 12, is adjustable by sliding L - section members 28, 30 relative to each other , and securing them with clamping nut 38.

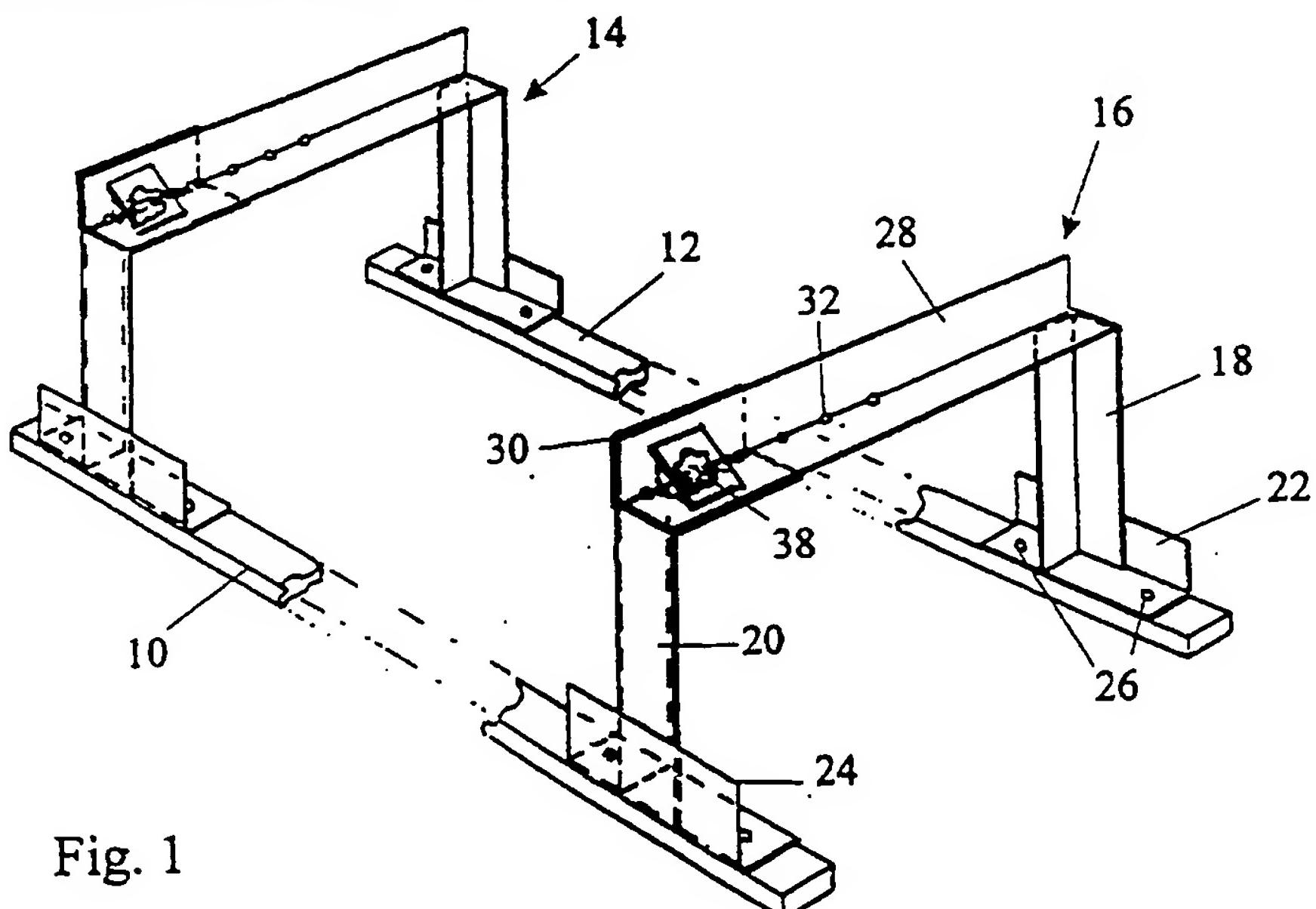
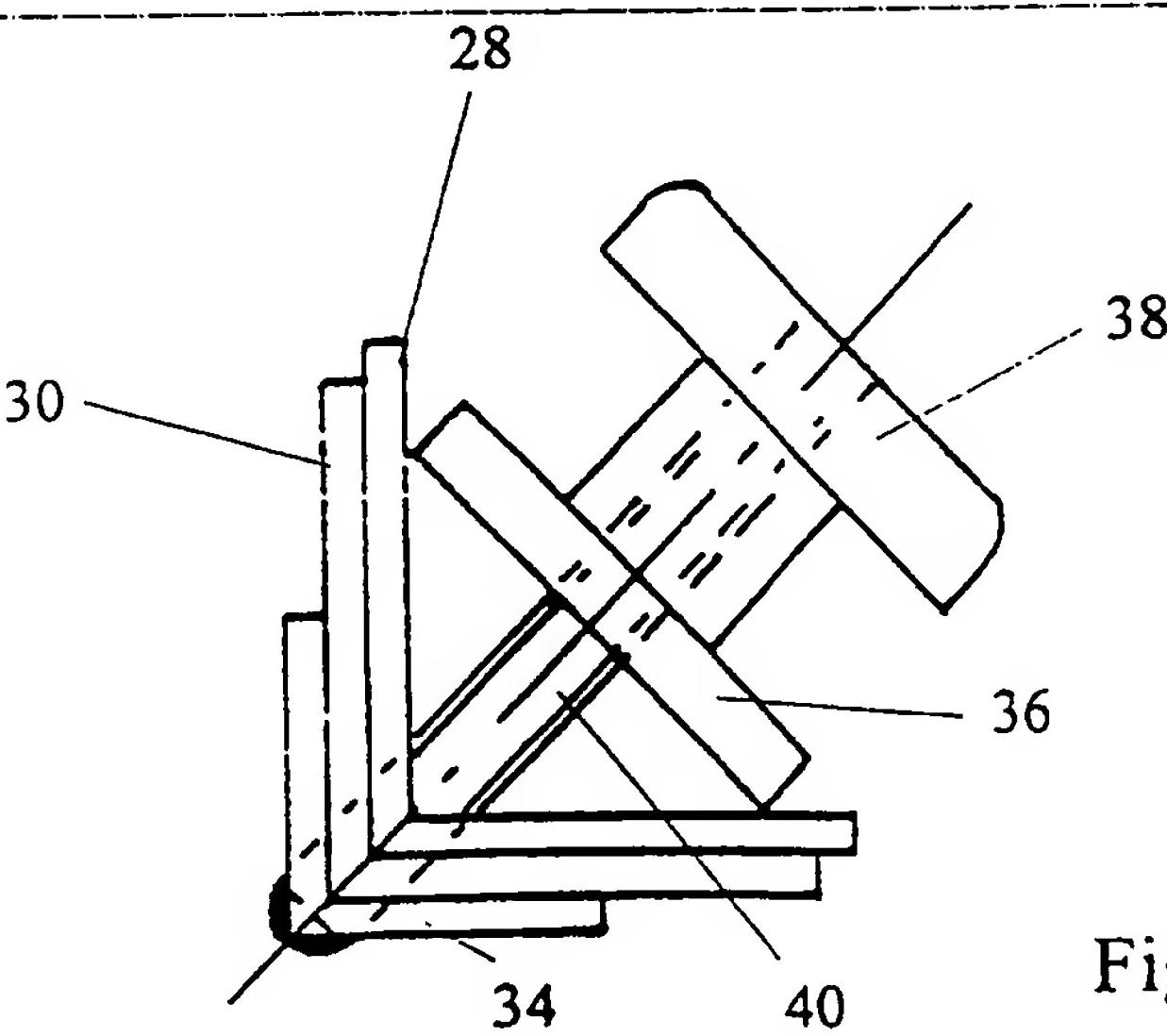
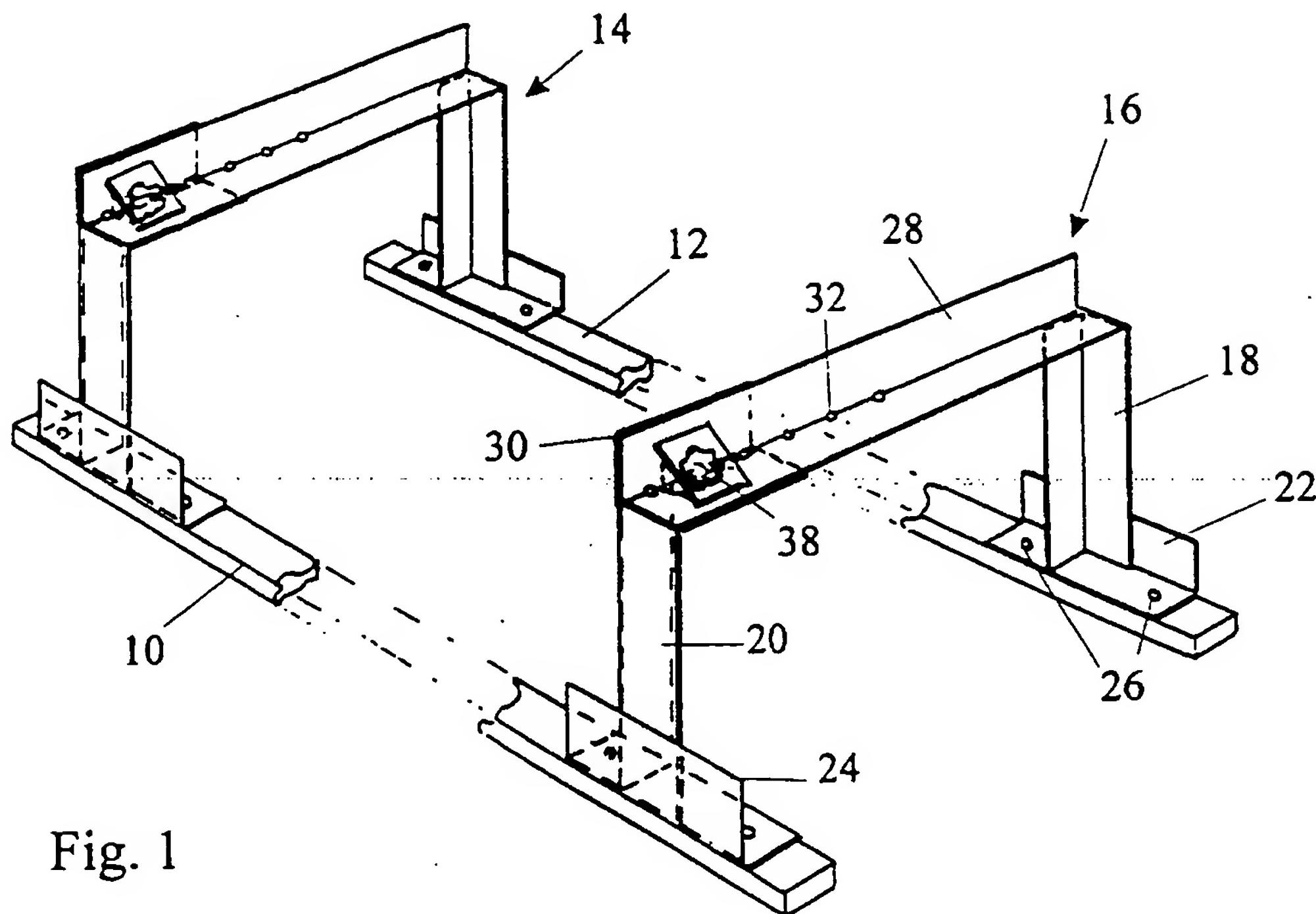


Fig. 1

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Method and Apparatus for Fixing Roof Tiles

Field of the invention

5 The present invention relates to a method and an apparatus for fixing ridge and hip tiles to a roof.

Background of the invention

10 Where two planes of roof tiles meet at an outwardly convex edge, be it a horizontal ridge or an inclined hip, angled tiles need to be cemented over the edge to prevent ingress of water. Accurate positioning of such angled tiles is normally effected by drawing a chalk line on the
15 adjoining roof tiles for guidance but this method is not particularly effective as the line may be washed away by rain. A further problem is that cement does not stay in position while the tiles are being cemented over the edge, with the result that a lot of cement is wasted.

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Object of the invention

The present invention seeks to provide a method and an apparatus for mitigating the foregoing disadvantages.

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Summary of the invention

In accordance with a first aspect of the present invention, there is provided a method of fixing angled tiles along an outwardly convex edge of a roof, which method comprises providing two battens, rigidly securing the battens by means of U-shaped brackets to lie parallel to one another at a distance apart corresponding to the width of the angled tiles, resting the battens with their securing brackets over the roof tiles adjoining the edge to straddle the edge, cementing the tiles to the edge while using the battens to align the tiles on the edge and to retain the

cement used to fix the tiles and subsequently withdrawing the battens.

The invention simplifies the fixing of edge tiles
5 because the battens act as shuttering allowing cement to be placed only where it is needed over the edge. The battens also define a channel that is only as wide as the angled tiles. As a result, the tiles are automatically positioned in line with one another and with the apex of the edge when
10 they are placed in the channel and pressed down on the cement base retained within the channel by the battens.

Because the battens are secured to one another by U-shaped brackets, the brackets afford clearance for the
15 convex edge and they do not therefore interfere with the positioning of the battens one on each side of the edge.

In accordance with a second aspect of the invention,
there is provided an apparatus for use in fixing angled
20 tiles along an outwardly convex edge of a roof, comprising two battens and at least two U-shaped brackets rigidly secured to the battens and serving to hold the battens parallel to one another and at a distance apart corresponding to the width of the angled tiles.

25 Preferably the U-shaped brackets are of adjustable width to allow the separation of the battens to be set to suit angled tiles of different sizes.

30 Conveniently, the U-shaped brackets may be formed of two L-shaped member that are slidable relative to one another and means for clamping the L-shaped members to one another in their desired relative position.

35 The limbs of each of the L-shaped members may suitably be formed of angle iron.

The means for clamping the L-shaped members to one another, may comprise aligned holes in the overlapping limbs of the members and a bolt passing through one of the holes.

5 If the limbs of the L-shaped members are of angle iron, then the holes are preferably situated in the corners of the limbs and the bolt may lie at 45° to the sides of the limbs.

10 Improved clamping is achieved if the bolt has an angled head to fit over the convex side of the corner and a square washer is placed in the concave side of the corner.

Brief description of the drawings

15 The invention will now be described further, by way of example, with reference to the accompanying drawings, in which:

20 Figure 1 is a perspective view of two battens located in fixed relation to one another by two U-shaped brackets, and

Figure 2 is a section through one of the U-shaped brackets showing the clamping bolt that is used in setting the separation of the two battens.

25 Detailed description of the preferred embodiment

The drawings show an apparatus or jig for use in fixing tiles to an outwardly convex roof edge such as a horizontal ridge or a sloping hip. The apparatus comprises two battens 30 10 and 12 that are secured to two brackets 14 and 16 that have the shape of an invert "U". While the brackets may be of fixed geometry and dimensioned for use with only one size of edge tile, the illustrated preferred embodiment of the invention allows allow the separation between the battens 10 35 and 12 to be adjusted to suit different sizes of edge tile.

The brackets 14 and 16 are of similar constructions and each is formed of two generally L-shaped members. All the limbs of the members forming the brackets 14 and 16 are formed of 3mm thick mild steel angle section that are welded to one another. The first L-shaped member has an upright section 18 welded at its upper end, as viewed, to a long horizontal section 28 having a series of holes 32 drilled in the corner. The upright section 18 is also welded to a foot 22 having holes 26 for screws or nails used to fix the brackets 14, 16 to the batten 12. The second L-shaped member has an upright section 20, a foot 24 and a shorter horizontal section 30 that overlaps and lies behind the horizontal section 28 of the first L-shaped member. The section 30 has an elongate aperture formed in the corner its length exceeding the separation of the holes 32 in the first horizontal section 28.

The elongate hole will overlap in the second horizontal section will overlap at least one of the holes 32 in the first section regardless of the distance between the uprights sections 18 and 20. The width of the U-shaped bracket can therefore be adjusted to the width of the edge tiles being used and locked in position by the clamping bolt shown in more detail in Figure 2. A bolt 40 having a welded head 34 also made of angle section mild steel is passed through the aligned holes in the sections 28 and 30 to lie at 45° to the sides of the sections. A square washer 36 is placed over the bolt such that its edges rest on the sides of the first section 28 and clamping nut 38 with an easily gripped handle is screwed onto the bolt 40 and tightened on to the washer. The shape of the head 34 ensures that the bolt 40 cannot rotate thereby allowing the nut 38 to be tightened and loosened with one hand.

In use, the apparatus is first set to the right distance between the battens 10 and 12 by placing some edge tiles with their lateral edged edges resting on the ground.

The clamping nuts 38 are loosened to allow the battens 10 and 12 to move relative to one another and after they have been brought together to fit the sides of the edge tiles snugly, the clamping nuts 38 are tightened once again and 5 the apparatus is ready for use.

The two battens are now placed to rest one on each side of the edge to be tiled. Cement is laid in the channel defined by the two battens and the edge tiles are cemented 10 in place using the battens as a guide and as shuttering to keep the cement in place where it is needed. After edge tiles have been laid over the length of the battens, the battens are moved to a new position and the process 15 continued. Where the edge being tiled exceeds the length of the battens, alignment can be maintained by moving the battens to a position overlapping some of the edge tiles that have already been cemented in position.

After cementing edge tiles to a ridge, the battens will 20 automatically leave a neat cement edge but over a hip the battens will not be resting over a flat surface and a trowel may need to be passed over the exposed cement surfaces to remove any excess cement and leave a neater appearance.

CLAIMS

1. A method of fixing angled tiles along an outwardly convex edge of a roof, which method comprises providing two
5 battens, rigidly securing the battens by means of U-shaped brackets to lie parallel to one another at a distance apart corresponding to the width of the angled tiles, resting the battens with their securing brackets over the roof tiles adjoining the edge to straddle the edge, cementing the tiles
10 to the edge while using the battens to align the tiles on the edge and to retain the cement used to fix the tiles and subsequently withdrawing the battens.

2. An apparatus for use in fixing angled tiles along an outwardly convex edge of a roof, comprising two battens
15 and at least two U-shaped brackets rigidly secured to the battens and serving to hold the battens parallel to one another and at a distance apart corresponding to the width of the angled tiles.

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3. An apparatus as claimed in claim 2, wherein the U-shaped brackets are of adjustable width to allow the separation of the battens to be set to suit angled tiles of different sizes.

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4. An apparatus as claimed in claim 3, wherein each U-shaped bracket may be formed of two L-shaped members that are slideable relative to one another and means for clamping the L-shaped members to one another in their desired
30 relative position.

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5. An apparatus as claimed in claim 4, wherein the limbs of each of the L-shaped members is formed of mild steel of angle section.

6. An apparatus as claimed in claim 4 or 5, wherein the means for clamping the L-shaped members to one another,

comprise aligned holes in the overlapping limbs of the members and a bolt passing through one of the holes.

7. An apparatus as claimed in claim 5 and 6, wherein
5 the holes are situated in the corners of the limbs and the
bolt lies at 45° to the sides of the limbs.

8. An apparatus as claimed in claim 7, wherein the
bolt has an angled head to fit over the convex side of the
10 corner and a square washer is placed in the concave side of
the corner.

9. An apparatus for use in fixing angled tiles along
an outwardly convex edge of a roof constructed, arranged and
15 adapted to operate substantially as herein described with
reference to and as illustrated in the accompanying
drawings.



The
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Application No: GB 9808158.1
Claims searched: 1 - 9

Examiner: J D Cantrell
Date of search: 23 July 1998

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.P): E1S: SAB SAD SAF

Int Cl (Ed.6): E04D E04G

Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2281092 A RYDER	1 - 4, 6

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| X | Document indicating lack of novelty or inventive step | A | Document indicating technological background and/or state of the art. |
| Y | Document indicating lack of inventive step if combined with one or more other documents of same category. | P | Document published on or after the declared priority date but before the filing date of this invention. |
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